

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 3, 12, 16, 75, and 82-87.

4 Please amend Claims 1, 2, 4, 7, 9, 11, 14, 15, 55, 56-58, 60, 74, and 79; and add new
5 Claims 88-98 as follows:

6 1. (Currently Amended) A physiological training and evaluation simulator suitable for training
7 and testing personnel, comprising a simulated physiological structure and an evaluation circuit including a
8 conductive elastomer, wherein a conductive path through a segment of the evaluation circuit that is
9 configured as a portion of the simulated physiological structure is complete prior to a manipulation of said
10 at least a portion of the simulated physiological structure and said evaluation circuit is configured to
11 provide a signal when the manipulation of said at least the portion of the simulated physiological structure
12 causes the conductive path through the segment of the evaluation circuit to be opened.

13 2. (Currently Amended) A physiological training and evaluation simulator suitable for training
14 and testing personnel, comprising:

15 (a) a simulated physiological structure; and

16 (b) an evaluation circuit including a conductive elastomer, the conductive
17 elastomer enhancing the realism of the ~~simulator~~ simulated physiological structure, the conductive
18 elastomer being configured as a portion of the simulated physiological structure, said evaluation
19 circuit being configured to provide ~~[[a]]~~ an electrical signal relating to a simulated procedure being
20 performed on the simulated physiological structure, the electrical signal originating from the portion
21 of the simulated physiological structure including the conductive elastomer without requiring:

22 (i) an electrical current to be provided by an instrument placed in contact
23 with the evaluation circuit during the simulated procedure; or

24 (ii) the use of an electrically conductive instrument to electrically couple
25 portions of the evaluation circuit together.

26 3. (Canceled)

27 4. (Currently Amended) The physiological training and evaluation simulator of Claim 2, wherein
28 the evaluation circuit is configured to provide the signal when a change in pressure is applied to said at
29 least a portion of the simulated physiological structure.

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1 5. (Original) The physiological training and evaluation simulator of Claim 4, wherein the
2 evaluation circuit comprises a piezoelectric element responsive to a change in pressure.

3 6. (Original) The physiological training and evaluation simulator of Claim 4, wherein the
4 evaluation circuit comprises a capacitance based sensor, and the signal corresponds to a magnitude of the
5 applied pressure.

6 7. (Currently Amended) The physiological training and evaluation simulator of Claim 2, wherein
7 the evaluation circuit is configured to provide the signal when said at least a portion of the simulated
8 physiological structure including the conductive elastomer is touched ~~either~~ by a user of the
9 physiological training and evaluation simulator, ~~or by an object used in connection with performing the~~
10 ~~simulated procedure.~~

11 8. (Original) The physiological training and evaluation simulator of Claim 7, wherein the
12 evaluation circuit comprises a capacitance sensitive switch.

13 9. (Currently Amended) The physiological training and evaluation simulator of Claim 7, wherein
14 the evaluation circuit comprises a resistance sensitive switch.

15 10. (Original) The physiological training and evaluation simulator of Claim 7, wherein the
16 evaluation circuit comprises a radio sensitive switch.

17 11. (Currently Amended) The physiological training and evaluation simulator of Claim 2,
18 wherein the evaluation circuit is configured to provide the signal when a manipulation of said at least a
19 portion of the simulated physiological structure including the conductive elastomer causes the
20 evaluation circuit to close.

21 12. (Canceled)

22 13. (Canceled)

23 14. (Currently Amended) The physiological training and evaluation simulator of Claim 2,
24 wherein the evaluation circuit is incomplete at a gap in the evaluation circuit, and wherein the evaluation
25 circuit is completed when ~~at least one of the follows occurs:~~

26 (a) ~~a conductive probe employed in the simulated procedure is positioned in the gap~~
27 ~~to correctly perform the simulated procedure, thereby completing the path through the evaluation circuit,~~
28 ~~the conductive probe not being coupled to a source of electrical current until the conductive probe is~~
29 ~~electrically coupled to at least part of the evaluation circuit proximate the gap; and~~

30 (b) adjacent ends of the evaluation circuit are coupled together to complete the circuit.

1 15. (Currently Amended) The physiological training and evaluation simulator of Claim 2,
2 wherein the evaluation circuit is configured to provide the signal when a manipulation of said at least a
3 portion of the simulated physiological structure including the conductive elastomer causes the
4 evaluation circuit to open.

5 16. (Canceled)

6 17. (Original) The physiological training and evaluation simulator of Claim 2, further comprising
7 a sensor coupled with the evaluation circuit, and the evaluation circuit is configured to provide the signal
8 when wherein the sensor indicates a change in a physical property has been detected.

9 18. (Previously Presented) The physiological training and evaluation simulator of Claim 17,
10 wherein the sensor is configured to detect a change in temperature.

11 19. (Previously Presented) The physiological training and evaluation simulator of Claim 17,
12 wherein the sensor is a chemical sensor.

13 20. (Original) The physiological training and evaluation simulator of Claim 2, further comprising
14 additional evaluation circuits, each additional evaluation circuit comprising a conductive elastomer,
15 wherein each additional evaluation circuit is configured to provide a signal when a different portion of the
16 simulated physiological structure is manipulated during a procedure performed on the simulated
17 physiological structure.

18 21. (Previously Presented) The physiological training and evaluation simulator of Claim 2,
19 further comprising an indicator coupled to the evaluation circuit, such that in response to the signal the
20 indicator provides an indication relating to the performance of the simulated procedure.

21 22. (Original) The physiological training and evaluation simulator of Claim 21, wherein the
22 indicator comprises a light source, light emitted by the light source providing feedback regarding the
23 performance of the procedure.

24 23. (Original) The physiological training and evaluation simulator of Claim 21, wherein the
25 indicator comprises a meter, a change in the meter providing feedback regarding the performance of the
26 procedure.

27 24. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
28 simulated physiological structure is a simulated human tissue structure.

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1 25. (Original) The physiological training and evaluation simulator of Claim 24, wherein the
2 simulated human tissue structure comprises:

3 (a) at least one simulated membranous layer comprising at least one elastomeric
4 layer; and

5 (b) at least one simulated sub-membranous layer comprising at least one elastomeric
6 layer underlying a first membranous layer.

7 26. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
8 evaluation circuit is implemented in three dimensions.

9 27. (Original) The physiological training and evaluation simulator of Claim 26, wherein the
10 evaluation circuit is implemented as a three-dimensional grid.

11 28. (Original) The physiological training and evaluation simulator of Claim 27, wherein the
12 three-dimensional grid encompasses a majority of the simulated physiological structure.

13 29. (Original) The physiological training and evaluation simulator of Claim 2, wherein said
14 simulated physiological structure includes a plurality of integral fluid channels, and wherein the
15 evaluation circuit formed of the conductive elastomer is incorporated into at least some of the integral
16 fluid channels.

17 30. (Original) The physiological training and evaluation simulator of Claim 29, wherein the
18 evaluation circuit is incorporated into a wall of at least some of the fluid channels, such that the evaluation
19 circuit provides the signal if such a wall is damaged during the simulated procedure.

20 31. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
21 evaluation circuit couples to a processor configured to manipulate the signal.

22 32. (Original) The physiological training and evaluation simulator of Claim 31, wherein the
23 simulated physiological structure comprises a physiological control element configured to produce a
24 simulated physiological response in the simulated physiological structure, the physiological control
25 element being coupled to the evaluation circuit so that the processor uses the evaluation circuit to control
26 the physiological control element.

27 33. (Original) The physiological training and evaluation simulator of Claim 32, wherein the
28 physiological control element comprises at least one of a servo and a pump.

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1 34. (Original) The physiological training and evaluation simulator of Claim 31, wherein the
2 evaluation circuit is implemented with a plurality of branches that extend throughout at least a portion of
3 the simulated physiological structure where the simulated procedure will be performed, so that by
4 monitoring the plurality of branches, the processor determines a three-dimensional location of an
5 instrument during the simulated procedure.

6 35. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
7 simulated physiological structure comprises a simulated organ.

8 36. (Original) The physiological training and evaluation simulator of Claim 35, wherein the
9 evaluation circuit comprises a pressure sensor disposed at a periphery of the simulated organ.

10 37. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
11 evaluation circuit is implemented as a neural network that substantially corresponds to a neural network in
12 a physiological structure upon which the simulated physiological structure is modeled.

13 38. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
14 simulated physiological structure comprises a simulated joint.

15 39. (Original) The physiological training and evaluation simulator of Claim 38, wherein the
16 evaluation circuit is disposed proximate to a location on the simulated joint at which a medical device will
17 be employed in the simulated medical procedure, to evaluate whether a person performed the procedure
18 properly.

19 40. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
20 simulated physiological structure comprises a simulated bone.

21 41. (Original) The physiological training and evaluation simulator of Claim 40, wherein the
22 evaluation circuit is disposed at a periphery of the simulated bone, proximate a location on the simulated
23 bone at which a medical device will be employed in the simulated medical procedure, to evaluate whether
24 a person performed the procedure properly.

25 42. (Canceled)

26 43. (Original) The physiological training and evaluation simulator of Claim 2, wherein the
27 physiological training and evaluation simulator comprises a surgical trainer, and the simulated
28 physiological structure comprises at least one of a simulated human tissue structure and a simulated organ
29 included in the surgical trainer.

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1 44. (Original) The physiological training and evaluation simulator of Claim 43, wherein the
2 surgical trainer comprises:

3 (a) at least one simulated structure corresponding to an internal anatomical structure
4 of a human body;

5 (b) an exterior cover encompassing a substantial portion of the surgical trainer, the
6 exterior cover having at least one predefined opening defining an operative site, so that each opening is
7 disposed adjacent to a different structure, to facilitate access to said structure; and

8 (c) the simulated human tissue structure is incisable, and is disposed proximate to
9 each predefined opening, such that access to said at least one structure via the adjacent predefined
10 opening requires making an incision in said simulated human tissue structure, an exterior surface of each
11 simulated human tissue structure being substantially flush with respect to an outer surface of the exterior
12 cover, each simulated human tissue structure being removable to be replaced after use, said simulated
13 human tissue structure comprising a plurality of layers, said plurality of layers generally corresponding to
14 layers of tissue found in a human being at a location corresponding to the operative site, and at least one
15 of the plurality of layers including the conductive elastomer.

16 45. (Previously Presented) A medical training simulator suitable for medical skills training and
17 evaluation, the medical training model comprising a simulated physiological structure and an evaluation
18 circuit including a conductive elastomer, the evaluation circuit including a first conductive segment and a
19 second conductive segment disposed adjacent to each other, without being electrically coupled to each
20 other, the first conductive segment and the second conductive segment being part of the simulated
21 physiological structure, said evaluation circuit being configured to provide data related to proper
22 execution of a simulated medical procedure being performed using the simulated physiological structure
23 when the first conductive segment and the second conductive segment are placed in physical contact with
24 each other during the simulated medical procedure, thereby completing the evaluation circuit and
25 enabling the evaluation circuit to provide the data related to the proper execution of the simulated medical
26 procedure.

27 46. (Canceled)

28 47. (Canceled)

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1 48. (Previously Presented) The medical training simulator of Claim 45, wherein the evaluation
2 circuit is configured to provide additional data in response to at least one of the following conditions:

3 (a) a specific portion of the simulated physiological structure is manipulated;
4 (b) pressure is applied to at least a portion of the simulated physiological structure;
5 (c) at least a portion of the simulated physiological structure is touched;
6 (d) a manipulation of at least a portion of the simulated physiological structure causes
7 the evaluation circuit to close;

8 (e) a manipulation of at least a portion of the simulated physiological structure causes
9 the evaluation circuit to open;

10 (f) a sensor coupled to the evaluation circuit detects a change in a physical property;
11 and

12 (g) an instrument is placed in proximity to at least a portion of the simulated
13 physiological structure.

14 49. (Previously Presented) The medical training simulator of Claim 45, further comprising a
15 light source coupled to the evaluation circuit, such that light emitted by the light source provides an
16 indication of a quality with which the simulated medical procedure has been performed.

17 50. (Previously Presented) The medical training simulator of Claim 49, wherein the evaluation
18 circuit conveys a potential that triggers activation of the light source.

19 51. (Previously Presented) The medical training simulator of Claim 45, further comprising a
20 simulated medical device to be used when performing the simulated medical procedure, wherein the
21 simulated medical device includes an inductor, and wherein the evaluation circuit is configured to receive
22 a current induced by the inductor when the simulated medical device is correctly utilized to perform the
23 simulated medical procedure.

24 52. (Previously Presented) The medical training simulator of Claim 45, further comprising a
25 simulated medical device to be used when performing the simulated medical procedure, wherein the
26 evaluation circuit comprises a capacitance based sensor configured to provide data relating to a position
27 of the simulated medical device relative to the simulated physiological structure during the simulated
28 medical procedure.

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1 53. (Previously Presented) The medical training simulator of Claim 45, wherein the first
2 conductive segment and the second conductive segment are separated by a non conductive segment, such
3 that the proper execution of the simulated medical procedure requires the removal of the non conductive
4 segment and the first conductive segment and the second conductive segment to be coupled together to
5 complete the circuit.

6 54. (Previously Presented) The medical training simulator of Claim 45, wherein the first
7 conductive segment and the second conductive segment are separated by a gap, such that the proper
8 execution of the simulated medical procedure requires the at least one of the first conductive segment and
9 the second conductive segment to be repositioned and placed in contact with the other of the first
10 conductive segment and the second conductive segment to complete the circuit.

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1 55. (Currently Amended) A medical training simulator suitable for medical skills training and
2 evaluation, the medical training simulator comprising a simulated physiological structure and an
3 evaluation circuit including a conductive elastomer, said conductive elastomer comprising a first
4 elastomeric layer, a second elastomeric layer, and a conductor encapsulated by the first and second
5 elastomeric layers, at least a segment of the evaluation circuit including the conductive elastomer being
6 configured as a portion of the simulated physiological structure, wherein the evaluation circuit is
7 configured to provide data via an electrical signal originating from the portion of the simulated
8 physiological structure in response to at least one of the following conditions:

9 (a) ~~a specific~~ the portion of the simulated physiological structure is manipulated
10 without using an electrically conductive instrument configured to introduce an electrical current into the
11 evaluation circuit or provide a conductive path between different portions of the evaluation circuit;

12 (b) pressure is applied to ~~at least a~~ the portion of the simulated physiological structure
13 without using an electrically conductive instrument configured to introduce an electrical current into the
14 evaluation circuit or provide a conductive path between different portions of the evaluation circuit;

15 (c) ~~at least a~~ the portion of the simulated physiological structure is touched without
16 using an electrically conductive instrument configured to introduce an electrical current into the
17 evaluation circuit or provide a conductive path between different portions of the evaluation circuit;

18 (d) a manipulation of ~~at least a~~ the portion of the simulated physiological structure
19 causes a conductive path of the evaluation circuit to be completed, without using an electrically
20 conductive instrument configured to introduce an electrical current into the evaluation circuit or provide a
21 conductive path between different portions of the evaluation circuit;

22 (e) a manipulation of ~~at least a~~ the portion of the simulated physiological structure
23 causes the conductive path of the evaluation circuit to be opened;

24 (f) a sensor coupled to the evaluation circuit detects a change in a non-electrical
25 physical property, wherein the sensor is disposed within the simulated physiological structure; and

26 (g) an instrument is placed in proximity to at least a portion of the simulated
27 physiological structure, but not in contact with any portion of the evaluation circuit, the instrument
28 not being configured to introduce an electrical current into the evaluation circuit.

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1 56. (Currently Amended) The medical training simulator of Claim 55, wherein the
2 evaluation_circuit is distributed throughout ~~at least a~~ the portion of the simulated physiological
3 structure as a three dimensional grid.

4 57. (Currently Amended) A method for making a medical training simulator suitable for medical
5 skills training and evaluation, the method comprising the steps of:

6 (a) determining a physiological structure that the medical training simulator is to
7 simulate;

8 (b) determining a simulated medical procedure that will be performed on a simulated
9 physiological structure corresponding to the physiological structure; and

10 (c) constructing a medical training simulator including:

11 (i) a simulated physiological structure corresponding to the physiological
12 structure of step (a); and

13 (ii) an evaluation circuit comprising a conductive elastomer, at least some of
14 the conductive elastomer being configured as a portion of the simulated physiological structure, the
15 evaluation circuit being configured to provide feedback relating to the simulated medical procedure of
16 step (b), such that the evaluation circuit provides the feedback without the ~~input of an electrical current~~
17 ~~received from an instrument employed in the simulated medical procedure~~ use of an electrically
18 conductive instrument configured to introduce an electrical current into the evaluation circuit in the
19 portion of the simulated physiological structure or provide a conductive path between different segments
20 of the evaluation circuit in the portion of the simulated physiological structure during the simulated
21 medical procedure, the feedback comprising an electrical signal originating from the evaluation circuit in
22 the portion of the simulated physiological structure.

23 58. (Currently Amended) The method of Claim 57, wherein the step of constructing the medical
24 training simulator comprises the step of ~~applying~~ incorporating the evaluation circuit proximate to a
25 location on the simulated physiological structure at which the simulated medical procedure is performed,
26 to evaluate if a person performed the simulated medical procedure properly.

27 59. (Original) The method of Claim 58, wherein the step of applying the evaluation circuit
28 comprises the step of incorporating the evaluation circuit proximate to a periphery of the simulated
29 physiological structure.

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1 60. (Currently Amended) The method of Claim 57, wherein the step of constructing the medical
2 training simulator comprises the step of configuring the evaluation circuit to provide data in response to at
3 least one of the following conditions:

- 4 (a) ~~a specific~~ the portion of the simulated physiological structure is manipulated;
5 (b) pressure is applied to ~~said at least a~~ the portion of the simulated physiological
6 structure;
7 (c) ~~at least a~~ the portion of the simulated physiological structure is touched;
8 (d) a manipulation of ~~at least a~~ the portion of the simulated physiological structure
9 causes the evaluation circuit to close;
10 (e) a manipulation of ~~at least a~~ the portion of the simulated physiological structure
11 causes the evaluation circuit to open;
12 (f) a sensor coupled to the evaluation circuit detects a change in a physical property;
13 and
14 (g) an instrument is placed in proximity to ~~at least a~~ the portion of the simulated
15 physiological structure.

16 61. (Previously Presented) The method of Claim 57, wherein the step of constructing the medical
17 training simulator comprises the step of configuring the evaluation circuit to include an indicator that
18 provides an indication of whether the medical device is properly utilized to perform the simulated medical
19 procedure.

20 62.-73. (Canceled)

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1 74. (Currently Amended) A method for using a medical training simulator for medical skills
2 training and evaluation, comprising the steps of:

3 (a) providing a medical training simulator comprising a simulated physiological
4 structure a conductive elastomer-based evaluation circuit configured to evaluate a simulated medical
5 procedure; ~~and~~

6 (b) using the conductive elastomer-based evaluation circuit to monitor a person's
7 performance of the simulated medical procedure[.,.]; and

8 (c) enabling a user to selectively direct wherein the evaluation circuit circuit's
9 ~~produces an indication of the performance without using an electrical input received from an instrument~~
10 ~~when the instrument contacts the evaluation circuit during the simulated medical procedure~~ to at least one
11 member selected from the group of members consisting of:

12 (i) the user, so that the indication is immediately apparent to the user;

13 (ii) to another party; and

14 (iii) to an electronic storage location.

15 75. (Canceled)

16 76. (Original) The method of Claim 74, wherein the indication produced by the conductive
17 elastomer-based evaluation circuit is used to provide at least one of a visual and an audible feedback to
18 the person during the execution of the simulated medical procedure.

19 77. (Original) The method of Claim 74, wherein the indication produced by the conductive
20 elastomer-based evaluation circuit is used to determine a rate of learning.

21 78. (Original) The method of Claim 74, wherein the indication produced by the conductive
22 elastomer-based evaluation circuit is used to determine a physiological response for the medical training
23 simulator to emulate.

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1 79. (Currently Amended) A physiological training and evaluation simulator system for training
2 and testing personnel, comprising:

3 (a) a simulated physiological structure including a conductive elastomer-based
4 evaluation circuit configured to provide data relating to a simulated procedure being performed on the
5 simulated physiological structure ~~without using an electrical input received from an instrument when the~~
6 ~~instrument contacts the evaluation circuit during the simulated medical procedure, the simulated~~
7 physiological structure being selected from the group of simulated physiological structures consisting
8 of a bone and a joint; and

9 (b) a controller coupled to the conductive elastomer-based evaluation circuit, the
10 controller being configured to implement a plurality of functions, including:

11 (i) storing data obtained from the conductive elastomer-based evaluation
12 circuit[[],]; and

13 (ii) processing the data obtained from the conductive elastomer-based
14 evaluation circuit to determine a score rating a quality of the simulated procedure.

15 80. (Original) The physiological training and evaluation simulator system of Claim 79, wherein
16 the processor is further configured to implement the function of comparing the score for the simulated
17 procedure to at least one score from a previous simulated procedure.

18 81. (Original) The physiological training and evaluation simulator system of Claim 79, wherein
19 the processor is further configured to implement the function of determining a rate of learning.

20 82. -87. (Canceled)

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1 88. (New) A medical training simulator suitable for medical skills training and evaluation, the
2 medical training model comprising a simulated physiological structure and an evaluation circuit including
3 a conductive elastomer, the evaluation circuit including a first conductive segment and a second
4 conductive segment separated by a non conductive segment such that they are not electrically coupled to
5 each other, the first conductive segment and the second conductive segment being part of the simulated
6 physiological structure, said evaluation circuit being configured to provide data related to proper
7 execution of a simulated medical procedure being performed using the simulated physiological structure
8 when the non conductive segment is removed and the first conductive segment and the second conductive
9 segment are coupled together during the simulated medical procedure, thereby completing the evaluation
10 circuit and enabling the evaluation circuit to provide the data related to the proper execution of the
11 simulated medical procedure.

12 89. (New) A medical training simulator suitable for medical skills training and evaluation, the
13 medical training model comprising a simulated physiological structure and an evaluation circuit including
14 a conductive elastomer, the evaluation circuit including a first conductive segment and a second
15 conductive segment are separated by a gap, such that they are not electrically coupled to each other, the
16 first conductive segment and the second conductive segment being part of the simulated physiological
17 structure, said evaluation circuit being configured to provide data related to proper execution of a
18 simulated medical procedure being performed using the simulated physiological structure when either the
19 first conductive segment or the second conductive segment are repositioned and placed in contact with
20 either the other of the first conductive segment or the other of the second conductive segment during the
21 simulated medical procedure, thereby completing the evaluation circuit and enabling the evaluation
22 circuit to provide the data related to the proper execution of the simulated medical procedure.

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1 90. (New) A method for training medical personnel, the method comprising the steps of:
2 (a) providing a medical simulator including a simulated physiological structure
3 comprising:
4 (i) a target area to be accessed during a simulated medical procedure; and
5 (ii) a non-target area representing a portion of the simulated physiological
6 structure that can be undesirably damaged if the simulated medical procedure is performed
7 improperly, that portion comprising a conductive elastomer based evaluation circuit, the evaluation
8 circuit being configured to provide a signal relating to a simulated procedure being performed on the
9 simulated physiological structure, the signal being provided when that portion is improperly accessed
10 during a simulated medical procedure;
11 (b) enabling a trainee to use the medical simulator to execute a simulated medical
12 procedure; and
13 (c) monitoring the conductive elastomer based evaluation circuit during the
14 simulated medical procedure to determine if the trainee performs the simulated medical procedure
15 properly, improper performance being indicated by receipt of the signal from the conductive
16 elastomer based evaluation circuit during the simulated medical procedure, the signal indicating that
17 the trainee improperly accessed the non-target portion of the simulated physiological structure during
18 the simulated medical procedure.

19 91. (New) A physiological training and evaluation simulator suitable for training and testing
20 personnel who perform a simulated procedure, comprising a simulated physiological structure including
21 an outer surface and a plurality of evaluation circuits, each evaluation circuit comprising a conductive
22 elastomer, the plurality of evaluations circuits including:

23 (a) a first evaluation circuit positioned to provide feedback when an instrument is
24 properly positioned relative to the simulated physiological structure during the simulated procedure,
25 the first evaluation circuit defining a first generally two dimensional region; and

26 (b) a second evaluation circuit positioned to provide feedback when an instrument
27 is improperly positioned relative to the simulated physiological structure during the simulated
28 procedure, the second evaluation circuit defining a second generally two dimensional region, such
29 that the first and second generally two dimensional regions are substantially parallel to the outer
30 surface of the simulated physiological structure.

1 92. (New) The simulator of Claim 91, further comprising:

2 (a) a first light electrically coupled to the first evaluation circuit, such that when
3 the instrument is properly positioned relative to the simulated physiological structure during the
4 simulated procedure the first light is activated; and

5 (b) a second light electrically coupled to the second evaluation circuit, such that
6 when the instrument is not properly positioned relative to the simulated physiological structure during
7 the simulated procedure the second light is activated.

8 93. (New) The simulator of Claim 92, further comprising an additional evaluation circuit
9 electrically coupled to an additional light, the additional evaluation circuit being positioned to
10 provide feedback when an instrument is improperly positioned relative to the simulated physiological
11 structure during the simulated procedure; the additional evaluation circuit being positioned closer to
12 the first evaluation circuit than is the second evaluation circuit, such that illumination of the third
13 light indicates that the instrument is relatively closer to the first evaluation circuit, while illumination
14 of the second light indicates that the instrument is relatively farther away from the first evaluation
15 circuit.

16 94. (New) The simulator of Claim 91, further comprising a third evaluation circuit
17 positioned to provide feedback when an instrument is improperly positioned relative to the simulated
18 physiological structure during the simulated procedure, the third evaluation circuit defining a third
19 generally two dimensional region, such that the first, second and third generally two dimensional
20 regions achieve a bulls eye type configuration.

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1 95. (New) A physiological training and evaluation simulator suitable for training and testing
2 personnel who perform a simulated procedure, comprising a simulated physiological structure including
3 a plurality of evaluation circuits, each evaluation circuit comprising a conductive elastomer, the
4 plurality of evaluations circuits including:

5 (a) a first evaluation circuit positioned to provide feedback when an instrument is
6 properly positioned relative to the simulated physiological structure during the simulated procedure,
7 the first evaluation circuit defining a first generally two dimensional region; and

8 (b) a second evaluation circuit positioned to provide feedback when an instrument
9 is properly positioned relative to the simulated physiological structure during the simulated
10 procedure, the second evaluation circuit defining a second generally two dimensional region, such
11 that the first and second generally two dimensional regions are spaced apart from one another and
12 substantially parallel to one another.

13 96. (New) A physiological training and evaluation simulator suitable for training and testing
14 personnel, the simulator including a simulated physiological structure comprising:

15 (a) an exterior surface;

16 (b) a target portion configured to be accessed during a simulated medical
17 procedure; and

18 (c) a conductive elastomer based evaluation circuit disposed between the exterior
19 surface and the target portion, such that an incision through the conductive elastomer based
20 evaluation circuit is required in order to open the evaluation circuit.

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1 97. (New) A physiological training and evaluation simulator suitable for training and testing
2 personnel, comprising:

- 3 (a) a simulated physiological structure; and
4 (b) an evaluation circuit including a conductive elastomer, at least a portion of the
5 evaluation circuit including the conductive elastomer being disposed within the simulated
6 physiological structure, the conductive elastomer enhancing a realism of the simulated physiological
7 structure, the portion of the evaluation circuit in the simulated physiological structure including a gap
8 separating a first conductive segment from a second conductive segment, such that proper
9 execution of a simulated medical procedure causes the gap between the first and second conductive
10 segments to be eliminated, thereby producing an indication that the simulated medical procedure has
11 been properly performed.

12 98. (New) A physiological training and evaluation simulator suitable for training and testing
13 personnel, comprising:

- 14 (a) a simulated physiological structure;
15 (b) an evaluation circuit including a conductive elastomer, at least a portion of the
16 evaluation circuit including the conductive elastomer being disposed within the simulated
17 physiological structure, the conductive elastomer enhancing a realism of the simulated physiological
18 structure, the evaluation circuit producing an indication of the performance of a simulated medical
19 procedure; and
20 (c) a switch that in a first position provides the indication to the trainee during the
21 simulated medical procedure, and in a second position provides the indication to at least one of a
22 proctor and a storage medium, such that in the second position the trainee does not receive the
23 indication during the simulated medical procedure.

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1 99. (New) A physiological training and evaluation simulator suitable for training and testing
2 personnel, comprising:

3 (a) a simulated physiological structure;
4 (b) an evaluation circuit including a conductive elastomer, at least a portion of the
5 conductive elastomer being incorporated into the simulated physiological structure, the conductive
6 elastomer enhancing a realism of the simulated physiological structure, the evaluation circuit
7 producing an indication of the performance of a simulated medical procedure; and

8 (c) a switch disposed within the simulated physiological structure and
9 incorporated into the evaluation circuit, the switch having a first closed position and a second open
10 position, the simulator being configured such that during the proper execution of the simulated
11 medical procedure, the switch moves from the first position to second position, thereby enabling the
12 evaluation circuit to produce the indication, the having been selected from a group consisting of:

13 (i) a radiofrequency switch configured to detect a change in an amount of
14 radiofrequency energy the switch is exposed to during the simulated medical procedure; and

15 (ii) a capacitance switch configured to detect a change in an ambient
16 electrical field the switch is exposed to during the simulated medical procedure.

17 100. (New) A physiological training and evaluation simulator suitable for training and testing
18 personnel, comprising:

19 (a) a simulated physiological structure;

20 (b) an evaluation circuit including a conductive elastomer, at least a portion of the
21 evaluation circuit including the conductive elastomer being disposed within the simulated
22 physiological structure, the conductive elastomer enhancing a realism of the simulated physiological
23 structure, the evaluation circuit producing an indication of the performance of a simulated medical
24 procedure; and

25 (c) a tool to be used during the simulated medical procedure, the evaluation circuit
26 having been configured such that the tool will induce a current in the evaluation circuit during the
27 proper execution of the simulated medical procedure, thereby enabling the evaluation circuit to
28 produce the indication, said induction occurring without said tool being in physical contact with the
29 evaluation circuit.